#### **ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)** February 2002 BUDGET ACTIVITY PE NUMBER AND TITLE 0203801A - Missile/Air Defense Product Improvement 7 - Operational system development **Program** FY 2002 FY 2003 FY 2004 FY 2005 FY 2006 FY 2007 **Total Cost** FY 2001 Cost to COST (In Thousands) Actual Estimate Estimate Estimate Estimate Estimate Estimate Complete Total Program Element (PE) Cost 13892 13727 43738 45266 32630 17100 11124 0 200576 PATRIOT PROD IMP PGM 6440 43713 45244 32607 17100 11124 0 182281 036 9758 AVENGER PIP 2000 0 0 0 0 0 0 038 25 22 23 STINGER RMP PIP 5452 3969 0 0 0 18295 303

A. Mission Description and Budget Item Justification: The goal of the Air Defense Artillery (ADA) modernization is to provide well-trained soldiers with the most capable systems at the right time to defeat the evolving threat. The ADA systems support the Air and Missile Defense (AMD) force which assists the Army and the Joint Force in gaining Full Spectrum Dominance in any operational requirement. ADA must continually be upgraded and modernized to meet all challenges, from small scale contingencies to major theater wars (MTW). The FY03 budget funds critical improvements to the Patriot program.

B. Program Change Summary	FY 2001	FY 2002	FY 2003
Previous President's Budget (FY2002 PB)	12248	8539	10043
Appropriated Value	12365	13839	0
Adjustments to Appropriated Value	0	0	0
a. Congressional General Reductions	0	-112	0
b. SBIR / STTR	-359	0	0
c. Omnibus or Other Above Threshold Reductions	0	0	0
d. Below Threshold Reprogramming	2000	0	0
e. Rescissions	-114	0	0
Adjustments to Budget Years Since FY2002 PB	0	0	33695
Current Budget Submit (FY 2003 PB )	13892	13727	43738

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FY02 Congressional increase of \$5.3 million for Patriot Ground SLEP. FY03 increase for Patriot Recapitalization requirements.		

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BUDGET ACTIVITY 7 - Operational system development	(	E NUMBER 0203801A Improvem	- Missile/	Air Defer	nse Produ	ct		PROJECT <b>036</b>	
COST (In Thousands)	FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
036 PATRIOT PROD IMP PGM	6440	9758	43713	45244	32607	17100	11124	0	182281

A. Mission Description and Budget Item Justification: The Patriot Product Improvement Program upgrades the Patriot system through a series of individual materiel changes (MC) culminating in the attainment of the Patriot Advanced Capability - 3 (PAC-3) system. The communication upgrades improve Patriot's above and below battalion communication equipment. These changes eliminate Patriot-peculiar communications equipment and improve Patriot's interoperability between systems and the Services. FY00 was the first year for the Remote Launch Communication Enhancement Upgrade (RLCEU) Link 16 Phase 1 and Post Deployment Build 5 (PDB 5). RLCEU Link 16 will develop and test the hardware required for a Link-16 terminal, terminal control, and communications processing equipment to receive and process the Link 16 Joint Data Net information. PDB 5 will improve system capability against advanced threats (Theater Ballistic Missiles and Air-Breathing Threats (TBMs and ABTs) in all environments, to include clutter and/or intense Electronic Counter Measures (ECM). Program objective will be to define the software changes necessary to enhance system capabilities against advanced TBM and cruise missile threats. In addition, interoperability improvements [e.g., Cooperative Engagement Capability (CEC) interface, cueing, and Tactical Data Information Link (TADIL) direct to Fire Unit (FU)], PAC-3 missile integration improvements in ground software, Classification Discrimination & Identification (CDI3) enhancements, and on-line diagnostic evolution will be addressed. This system supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

### **FY 2001 Accomplishments:**

• 2454 Continued RLCEU Link 16 Phase I

• 3986 Initiated Post PDB 5

Total 6440

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# FY 2002 Planned Program

• 4458 Continue Post PDB 5

• 5300 Recap

Total 9758

# FY 2003 Planned Program

6713 Continue Post PDB 5

• 27750 Recap

• 4250 Special Program (PIP)

• 5000 SIAP

Total 43713

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BUDGET ACTIVITY 7 - Operational system development		020380	SER AND TI  1A - Mis  vement P	sile/Air D	efense P	roduct		PROJE <b>036</b>	CT
B. Other Program Funding Summary	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	Total Cost
Budget Activity 3 - Patriot Mod (C50700)  Budget Activity 3 - Patriot Mod Initial Spares CA0267	22718 2625				90198 15206			340100 23337	1074560 144291

C. Acquisition Strategy: The design objective of the Patriot system was to provide a baseline system capable of modification to cope with the evolving threat. This alternative minimizes technological risks and provides a means of enhancing system capability through planned upgrades of deployed systems. The Patriot program consists of two interrelated acquisition programs - the Patriot growth program and the PAC-3 missile program. Growth program modifications are grouped into configurations, which are scheduled to be fielded in the same timeframe. Configuration groupings are convenient for managing block changes of hardware and software and are not a performance-related grouping. However, incremental increases in performance will be determined for each configuration in order to provide benchmarks for configuration testing and for the development of user doctrine and tactics.

D. Schedule Profile	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Post PDB -5 Software Improvements Initiated	1Q						
RLCEU Link 16 Phase I Program Initiated	1Q						
RLCEU Link 16 Phase I Program Continuation	1-4Q						
PAC-3 Missile FUE	4Q						
PAC-3 Missile MS III		4Q					
PAC-3 Missile FOT			1-4Q	1-4Q			
PAC-3 Missile FRP			1Q				
PAC-3 Missile IOC					4Q		

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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 200 Cos		FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete		Target Value of Contrac
a . RLCEU Link 16 Phase I			0	122	6	0		0		0	1226	(
b . Post PDB 5			0	160	7	1174		1636		Continue	4417	Continue
c . Recap			0		0	5300	2Q	27750	2Q	0	33050	(
d . Special Program (PIP)			0		0	0		4250	2Q	0	4250	(
e. SIAP			0		0	0		5000	3Q	0	5000	(
Subtotal:			0	283	3	6474		38636		Continue	47943	Continue
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 200 Cos		FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete		Targe Value of Contrac
a . In-House Support		RSA/AL	13303	85	8	800		700		Continue	Continue	Continue
b . Matrix Support		RSA/AL	2043	70	0	604		509		Continue	Continue	Continue
Subtotal:			15346	155	8	1404		1209		Continue	Continue	Continue

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BUDGET ACTIVITY 7 - Operational syste		020	PE NUMBER AND TITLE  0203801A - Missile/Air Defense Product Improvement  PROJECT  036  Program									
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete		Target Value of Contract
a . Missile Command	1095	RSA/AL	12586	1449		1462		1400		Continue	16897	Continue
b . White Sands Missile Range	MIPR	WSMR/NM	11740	600		418		424		Continue	Continue	Continue
c . RDEC and Other Govt Agent	1095/MIPR	RSA/AL	95732	0		0		2044		0	97776	0
Subtotal:			120058	2049		1880		3868		Continue	Continue	Continue
Subtotal:			120058	2049		1880		3868		Continue	Continue	Continue
	Contract Method & Type	Performing Activity & Location	Total PYs Cost	2049 FY 2001 Cost	FY 2001 Award Date	1880 FY 2002 Cost	FY 2002 Award Date	3868 FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total	Continue  Target  Value of  Contract
Subtotal:  IV. Management Services  Subtotal:	Method &		Total	FY 2001	Award	FY 2002	Award	FY 2003	Award	Cost To	Total Cost	Target Value of
IV. Management Services	Method &		Total PYs Cost	FY 2001 Cost	Award	FY 2002 Cost	Award	FY 2003 Cost	Award	Cost To Complete	Total Cost	Target Value of Contract